Transition to water sensitive communities – What will it take?

ABSTRACT:

Uptake of water sensitive urban design (WSUD) within new South Australian developments is ad-hoc, depending largely on the ability of a Council engineer to negotiate a positive outcome or a progressive developer who recognises the market advantages of a water sensitive development.

To achieve the cultural shift needed to see WSUD as a mainstream feature of our communities in the future, local government, state agencies and the development industry need to be sold on the benefits. This in itself is constraining the adoption of the SA Water Sensitive Urban Design Policy within planning policy, building codes and other regulations that will be essential to drive change. Is the policy alone the holy grail we hope it to be, or can we do more to drive innovation?

Mellissa will describe opportunities for SA to consider with regard to urban design, capacity building, decision support tools, and online assessments that together could create a pathway to WSUD adoption that is more efficient, achieves measurable benefits for the environment and enhanced liveability outcomes for our communities.

BIO:

Mellissa Bradley is a strong advocate for the creation of more liveable cities and towns through the delivery of urban growth and infill developments that incorporate integrated water management objectives and best practice water sensitive urban design.

With more than 20 years experience working within the fields of civil design, development assessment, policy development, environmental management and construction management, Mellissa understands the support that industry needs to ensure water sensitive urban design is commonplace within our urban landscape.

Her experience in engineering and planning, together with a history of developing and implementing capacity building programs for local government in catchment and urban water management, has brought Mellissa to her current role as Program Manager with Water Sensitive SA – a capacity building program for water sensitive urban design.

Having worked in development assessment in Sydney in the mid to late 90s at a time when inner western Sydney was facing a massive transformation of low density to high rise housing, immediately adjacent the Parramatta River, Mellissa witnessed first-hand the impacts of rapid urban consolidation. On-site detention was the only real tool being applied for stormwater control. Stepping forward nearly 20 years Mellissa has been pushing to see stormwater quality management taking its rightful place as a key design consideration, together with the use of alternative water resources to support greening of our urban landscape.

Current Water Sensitive Urban Design (WSUD) Research in South Australia

ABSTRACT:

Research into Water Sensitive Urban Design (WSUD) is being undertaken by the Centre for Water Management & Reuse of the University of South Australia. The research is focussed on supporting the implementation of WSUD, and has both a policy and a technical focus. It receives funding from a range of sources, including the Goyder Institute, the Stormwater Management Authority and Local Government.

This talk will provide an overview of the research and some of the findings, with an emphasis on the technical aspects. The first stage of the study funded by the Goyder institute had three tasks, including an inventory of WSUD sites in South Australia, Social assessment /Community consultation on reference sites, and an initial assessment of the potential of WSUD to manage infill development. Stage 2 is currently underway, and includes an investigation of the means by which WSUD could be incorporated into the planning system, plus research to provide information to produce guidelines on modelling both WSUD quality and quantity.

Funding from Local Government is being used to confirm the impact of infill development, and will further address the means of managing the impact. Data from a catchment in Glengowrie has already confirmed that there is a significant impact on both peak flows and flow volumes over the last twenty years due to the development that has already taken place.

BIO:

Dr David Kemp was, until his retirement from full time work, employed as the Principal Hydrologist by the Department of Planning, Transport & Infrastructure, South Australia. He has more than 30 years experience in South Australian hydrology and stormwater management, and has a commitment to furthering knowledge of both flood hydrology and urban runoff quality management.

He is now an Adjunct Senior Research Fellow at the Centre for Water Management & Reuse, University of South Australia, and is continuing his involvement in the implementation of Water Sensitive Urban Design, particularly relating to the hydrological changes associated with infill development.

Dr Kemp has a PhD in engineering hydrology, is a Fellow of Engineers Australia, and a Chartered Professional Engineer.

Adelaide Coastal Water Quality Improvement Plan and Stormwater management, connecting the dots

ABSTRACT:

The Adelaide Coastal Waters Study (2007) found that discharges into Adelaide's coastal waters from wastewater treatment plants, industry and stormwater outlets are high in nutrients and suspended solids and are causing loss of seagrass along the Adelaide coastline. In response to the study the Adelaide Coastal Water Quality Improvement Plan (ACWQIP) developed long term strategies to achieve and sustain water quality consistent with community expectations for Adelaide's coastal waters.

Implementation for many of the strategies in the ACWQIP is well underway, with Australian Government National Landcare Programme funding support for the project titled 'Catchment to coast focus for water quality improvement across urban Adelaide' (Catchment to Coast). The Catchment to Coast Project is a 2 million dollar project with a key focus to build an understanding in the community of how activities we carry out on land impact on water quality in urban waterways, creeks and coastal waters. It comprises six sub-projects including WSUD demonstration sites in the Cities of Adelaide, Unley and West Torrens and Rain Garden 500. These sub projects promote the importance of improving stormwater quality and where and how rain garden installations may be incorporated.

Linda-Marie and Ruth will outline these projects and why we need to rethink how we engineer stormwater infrastructure to reduce environmental impacts.

BIOS:

Linda-Marie McDowell is a Senior Environment Protection Officer at the EPA. Her current role in the Water Quality Branch is based around follow on work from the Adelaide Coastal Waters Study including the development of the Adelaide Coastal Water Quality Improvement Plan (ACWQIP). Linda-Marie is the project leader on the Australian Government funded Catchment to Coast project that is about implementing components of the Adelaide Coastal Water Quality Improvement Plan.

Her academic background is in Biological Sciences, Geography and Environmental Studies where she has completed undergraduate and postgraduate studies at Flinders University and Adelaide University.

Linda–Marie's past roles include Waterwatch Coordinator in Mount Gambier, Coastcare Facilitator, Robe, working with coastal community groups from the South East, Fleurieu region and Kangaroo Island on coastal protection and education based projects, the Waterwatch SA State Coordinator in the Adelaide EPA Office and marine planning at the Department for Environment and Heritage, Coast and Marine Branch.

Ruth Ward is a Senior Environment Protection Officer (Water Quality) at the EPA where she has worked for 10 years. In her current role she provides input into a range of water quality issues around stormwater pollution prevention, the implementation of water sensitive urban design and the urban water sector.

During her time at the EPA, Ruth has worked in a number of roles with experience in regulation, compliance and enforcement, waste management, wastewater in the food and agricultural sector and development assessment. Ruth is conversant with legislation around these areas, particularly the Environment Protection Act 1993 and the Development Act 1993.